

# ABOUT THE CONTRIBUTORS

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## AUTHORS

**Robert F. Boruch** is University Chair Professor in the Graduate School of Education and the Statistics Department of the Wharton School at the University of Pennsylvania. A Fellow of the American Statistical Association, he has received awards for his work on research methods and policy from the American Educational Research Association, the American Evaluation Association, and the Policy Studies Association. Boruch is the author of nearly 150 scholarly papers and the author or editor of a dozen books on topics ranging from evaluation of AIDS prevention programs and social experiments to assuring confidentiality of data in social research.

**David W. Breneman** is University Professor and Dean of the Curry School of Education at the University of Virginia. He was Visiting Professor at the Harvard Graduate School of Education from 1990 to 1995, where he taught graduate courses on the economics and financing of higher education, on liberal arts colleges, and on the college presidency. As a Visiting Fellow at the Brookings Institution, he conducted research for a book entitled *Liberal Arts Colleges: Thriving, Surviving, or Endangered?*, published by Brookings in 1994. From 1983 to 1989, Breneman served as president of Kalamazoo College, a liberal arts college in Michigan. Prior to that, he was a Senior Fellow at Brookings, specializing in the economics of higher education and public policy toward education. From 1972 to 1975, he was Staff Director of the National Board on Graduate Education at the National Academy of Sciences, where he wrote on policy issues confronting graduate education. In addition, Breneman served as Executive Editor of *Change*, the magazine of higher learning. Dr. Breneman received his bachelor's degree in Philosophy from the University of Colorado and his Ph.D. in Economics from the University of California at Berkeley, and taught at Amherst College before moving to Washington in 1972.

**Dominic Brewer** is a Labor Economist specializing in the economics of education and education finance. His research has focused on educational productivity and teacher incentives, using large national databases such as High School and Beyond and the National Education Longitudinal Study of 1988. Examples of this work include an analysis of the effects of teacher education and quality on stu-

dent achievement gains, the interaction between student and teacher race, gender and ethnicity, the effects of ability grouping on student achievement, and the effects of administrative resources on student performance. He has published numerous articles in academic journals such as *Review of Economics and Statistics*, *Journal of Labor Economics*, *Industrial and Labor Relations Review*, and *Economics of Education Review*, as well as other publications such as *Phi Delta Kappan*. Dr. Brewer received a Ph.D. in Labor Economics from Cornell in 1994, and holds a bachelor's degree from Oxford University. He has been an Associate Economist at RAND since 1994 and is also a Visiting Assistant Professor of Economics at the University of California, Los Angeles.

**Peter Cappelli** is Co-Director of the National Center on the Educational Quality of the Workforce (EQW) at the University of Pennsylvania.

**Christopher T. Cross** is President of the Council for Basic Education (CBE) as well as President of the Maryland State Board of Education. Before joining CBE, Mr. Cross served as Director of the Education Initiative for The Business Roundtable and as Assistant Secretary of Education Research and Improvement (OERI) in the U.S. Department of Education. At OERI, he was responsible for the research, statistical, and improvement programs of the Department of Education. He joined the federal government for the first time in 1969 with the U.S. Department of Health, Education, and Welfare, where he served as Deputy Assistant Secretary for Legislation. From 1973 to 1978, Mr. Cross served as the Senior Education Consultant and Republican Staff Director of the Committee on Education and Labor, U.S. House of Representatives. Mr. Cross has written extensively in the education and public policy areas, and his articles have appeared in numerous scholarly and technical publications. Mr. Cross earned a bachelor's degree from Whittier College and a master's degree in Government from California State University in Los Angeles.

**Fred J. Galloway** is the Director of Federal Policy Analysis at the American Council on Education (ACE). In this position, he represents the interests of the higher education community before the executive and legislative branches of the federal government and is responsible for analyzing the effects of legislation on colleges and universities. Before joining ACE, Dr. Galloway was a member of the faculty of the Economics Department at San Diego State University and of the School of Business at the University of San Diego. Dr. Galloway received both a bachelor's and master's degree from the University of California at San Diego, and a doctorate from Harvard University.

**Gary Hoachlander** is President of MPR Associates, Inc., a consulting firm specializing in management, planning, and research for a variety of public and private clients. A nationally known expert on vocational education and preparation for work, he also serves as MPR Associates' site director for the work performed by the firm for the National Center for Research in Vocational Education at the University of California at Berkeley. He has conducted research and published on a wide variety of issues including industry-based curriculum, industry skill standards, performance measures and assessment, finance, and national education data systems. Dr. Hoachlander received his Ph.D. in City and Regional Planning from the University of California, Berkeley. He also holds a master's degree in City Planning from U.C. Berkeley, and earned his bachelor's degree from Princeton University, where he attended the Woodrow Wilson School for Public and International Affairs.

**John F. Jennings** is the Director of the Center on National Education Policy. The Center's purpose is to inform the general public, educators, and policymakers of the developments in school reform across the country and also of the changes in federal education programs. From 1967 to 1994, Mr. Jennings worked in the area of federal aid to education for the U.S. Congress. In that capacity, he was involved for the last 25 years in nearly every major education debate held at the national level as well as the reauthorizations of the major federal education programs including the Elementary and Secondary Education Act, the Vocational Education Act, the School Lunch Act, the Individuals with Disabilities Education Act, and the Higher Education Act. Mr. Jennings has also edited several books, published numerous articles, and writes a national newsletter.

**Glynn D. Ligon** is President of Evaluation Software Publishing, Incorporated.

**David R. Mandel** is Vice President for Policy Development at the National Board for Professional Teaching Standards in Washington, D.C., where he has primary responsibility for overseeing the Board's standards development efforts and education policy and reform program. Previously, Mr. Mandel was Associate Director of the Carnegie Forum on Education and the Economy; a Senior Policy Analyst in the Office of the Under Secretary of Education; and the National Institute of Education's Assistant Director responsible for managing the Institute's research program in education finance, governance, and human capital. He began working on education policy issues in the early 70s at the U.S. Office of Economic Opportunity, where his efforts were directed at the needs of poor and minority children.

**Charles E. Metcalf** is President of Mathematica Policy Research, Inc., which is one of the nation's leading independent research firms and conducts public policy research and surveys for federal and state governments as well as private clients. He is nationally known for his research on social experimentation and income distribution and has directed research activities at Mathematica for the past 21 years. Dr. Metcalf specializes in experimental and sample design, data collection design, and analytic design efforts. His expertise, gleaned from 28 years of experience in the field, spans all facets of research design and analysis. He has played a major role in more than 30 major social experiments, demonstrations, and evaluations. Dr. Metcalf has a Ph.D. in Economics from the Massachusetts Institute of Technology.

**Morton Owen Schapiro** is Professor of Economics and Dean of the College of Letters, Arts, and Sciences at the University of Southern California. He and Michael McPherson have co-authored two recent books on American higher education: *Keeping College Affordable: Government and Educational Opportunity* (Brookings 1991), and (with Gordon Winston), *Paying the Piper: Productivity, Incentives, and Financing in U.S. Higher Education* (University of Michigan Press 1993).

**Fritz Scheuren** has extensive experience in using administrative records in sample surveys and other settings. Currently, Visiting Professor of Statistics at The George Washington University, Dr. Scheuren retired in 1994 as Director of the Statistics of the Income Division of the Internal Revenue Service. Formerly, he had been the Chief Mathematical Statistician at the Social Security Administration. In 1995, he won the Shiskin Award for contributions to U.S. economic statistics and among other honors is a Fellow of the American Statistical Association and the American Association for the Advancement of Science. He has published more than 90 papers, monographs, and books—both applied and theoretical—mainly in the area of survey sample design and estimation, including such topics as record linkage, privacy, and the handling of missing data. He holds a master's and doctoral degree in Statistics from The George Washington University.

**Diane Stark** is the Associate Director of the Center on National Education Policy. From 1988 to 1994, Ms. Stark was a legislative associate for the U.S. House of Representatives Committee on Education and Labor, where she assisted in the reauthorization of the major federal education programs. Prior to her work in the Congress, she was employed in the government relations offices of the National PTA and the Council of Chief State School Officers.

**Cathleen Stasz** is a Senior Behavioral Scientist at RAND and Site Director for the National Center for Research in Vocational Education (NCRVE). Her research areas include the implementation of advanced computer-based technologies in education, the workplace and the military, systemic school reform, and teaching and learning generic skills for the workplace. Currently, her projects include a study of the determinants of employer participation in school-to-work programs and an examination of the quality of student experiences in work-based learning environments.

**Amy Rukea Stempel**, Assistant Director for Standards Analysis at the Council for Basic Education (CBE), has been affiliated with the Council since 1989. In 1992, she left the CBE to teach the International Baccalaureate (English literature) at the Kodaikanal International School, Kodaikanal, India, and then returned to the CBE in the fall of 1994. Ms. Stempel has published numerous articles that inform the academic standards-setting process and the relationship of various education reforms to academic learning in CBE's flagship publication *Basic Education* and in *Teacher Magazine*. In addition, she designed the popular CBE chart "Standards: A Vision for Learning" (spring 1991), which synthesized all the current standards projects and was reprinted in 1994. A candidate for a master's degree in the Humanities at Georgetown University, Ms. Stempel is primarily engaged in writing about education reform and managing standards projects at CBE. She has a bachelor's degree in English from Carnegie Mellon University.

**James W. Stigler** is Professor of psychology at UCLA and Director of the Third International Mathematics and Science Study (TIMSS) Videotape Classroom Study.

**George Terhanian**, a doctoral candidate at the University of Pennsylvania, is presently serving as an American Education Research Association Research Fellow at the National Center for Education Statistics. His general research interest lies in synthesizing evidence generated by local experiments and nationally representative surveys. Mr. Terhanian has several years of teaching and administrative experience in public and private schools.

## DISCUSSANTS

**Sharon Bobbitt** received her Doctorate in Education Research from the University of Virginia in 1986. She worked for 8 years on the Schools and Staffing Survey, with a primary focus on teacher issues. She is currently Director of the Knowledge Applications Division in the Office of Educational Research and Improvement.

**Dennis Carroll** earned a Ph.D. in mathematics and quantitative psychology from Vanderbilt University in 1974. Since 1980, he has managed the National Center for Education Statistics' longitudinal studies program where several projects have incorporated records data.

**Barbara S. Clements** is Acting Director of the State Education Assessment Center at the Council of Chief State School Officers (CCSSO). She also directs the National Elementary/Secondary Education Data and Information System Project, which is funded by the U.S. Department of Education's National Center for Education Statistics to promote the standardization, automation, and effective utilization of data about education. Before joining the CCSSO staff, Dr. Clements worked on the development and administration of teacher assessment and evaluation instruments for the state education agency in Texas. She is a co-author of two textbooks on effective classroom management, soon to be released in their fourth edition. Dr. Clements holds a bachelor's degree in Education from the University of Texas at Austin, and is certified to teach secondary Spanish and Government. In addition, she has master's degree in Foreign Language Education and a Ph.D. in Educational Psychology from the University of Texas at Austin.

**Emerson J. Elliott** is a consultant on education policy, Federal statistics and management. He left the Federal Government in 1995 after a career that included heading the National Center for Education Statistics nearly eleven years and serving as the first "Commissioner of Education Statistics" when that post became a Presidentially appointed, Senate confirmed position under legislation enacted in 1988. Previously he had led the Issues Analysis Staff in the Office of the Under Secretary of Education, served as the Deputy Director of the National Institute of Education, and directed the OMB education branch when that was established in 1967.



**Mary Frase** is the Senior Technical Advisor in the Data Development and Longitudinal Studies Group, National Center for Education Statistics, in the U.S. Department of Education. Prior to joining NCES in 1985, she was a faculty member at Teachers College, Columbia University, and worked as an independent consultant advising state and local governments and conducting research in the areas of education policy, education finance, and state-local finance.

**William H. Freund** works within the U.S. Department of Education's National Center for Education Statistics. He recently assumed responsibility for adapting information technologies into the Center's data collections, program administration, and information dissemination. Just before this new position, he was responsible for institutional studies of postsecondary education. In that capacity, he was the program manager for the Integrated Postsecondary Education Data System (IPEDS)—a series of annual statistical surveys that collect enrollment, completions, finance, salary, and staffing data from the nation's postsecondary education institutions.

**Paula R. Knepper** is a Statistician in the Postsecondary Longitudinal Studies department of the National Center for Education Statistics.

**James F. McKenney** is currently the Director of Workforce Development, formerly the Office of College Employer Relations, at the American Association of Community Colleges (AACC). Also, he has served as the Assistant Vice President for Federal Relations, with responsibilities for the reauthorization of the Carl Perkins Vocational Education Act and the Job Training Partnership Act. As Director of Workforce Development, Dr. McKenney is charged with being the primary liaison between AACC and the various relevant federal departments and trade associations. In this role, Dr. McKenney has continued to track the implementation of the various federal human resource development laws. He received his bachelor's and master's degrees from the University of Florida and his doctorate from the University of Maryland.

**Michael McPherson** is the Dean of the faculty at Williams College. He is W. van Alan Clark Third Century Professor of Economics and Co-Director of the Williams Project on the Economics of Higher Education. Earlier, he served as Chair of the Williams Economics Department, as Senior Fellow in Economic Studies at the Brookings Institution and as Fellow of the Institute for Advanced Study. Mr. McPherson is co-author of two recent books, *Keeping College Affordable: Government and Educational Opportunity* (Brookings 1991) and *Paying the Piper*:

*Productivity, Incentives and Financing in American Higher Education* (University of Michigan Press 1993). His new book, *Economic Analysis and Moral Philosophy*, co-authored with Daniel Hausman, was published by Cambridge University Press in 1996.

**Jamie P. Merisotis** is the founding President of the Institute for Higher Education Policy in Washington, D.C. The Institute is a non-profit, non-partisan organization with the mission of fostering access to and quality in postsecondary education through the development and promotion of innovative solutions to the important and complex issues facing higher education. The Institute has conducted a number of recent studies including *The Next Step: Student Aid for Student Success*; *College Debt and the American Family*; *Enhancing Quality in Higher Education*; and *Affirmative Action and the Distribution of Resources in U.S. Department of Education Programs*.

**Kevin Miller** is currently Associate Professor of Psychology at the Beckman Institute at the University of Illinois, Urbana-Champaign. His research interests concern the effects of symbolic tools on cognitive development, focusing on how language and cultural differences between China and the United States affect the development of abilities such as reading and mathematical competence. He received his Ph.D. from the University of Minnesota, and then taught at Michigan State University and the University of Texas at Austin before joining the faculty at the University of Illinois. His research is currently supported by a Research Scientist Development Award and a research grant, both from the National Institute of Mental Health.

**Frederick Mosteller** is Roger I. Lee Professor of Mathematical Statistics Emeritus, Harvard University. He directs the Center for Evaluation of the Initiatives for Children Project at the American Academy of Arts and Sciences. Over the years, his research work has been devoted to theoretical and applied statistics. Dr. Mosteller works in data analysis, meta-analysis, robust methods, health and medicine, and social sciences, and has also written on sports statistics. While at Harvard, he has chaired the departments of Statistics, Biostatistics, and Health Policy and Management.

**Mary Rollefson** is a senior survey analyst with the National Center for Education Statistics. She has published several reports on teacher supply and demand and serves as the NCES liaison to the National Education Goals Panel.



**Donald B. Rubin** is Professor in the Department of Statistics, Harvard University. He has written nearly 250 publications (including several books) on a variety of topics, including computational methods, causal inference, survey methods, techniques for handling missing data, Bayesian methods, multiple imputation, matched sampling, and applications in many areas of social and biomedical science. Professor Rubin is a Fellow of the American Statistical Association, the Institute for Mathematical Statistics, the International Statistical Institute, the Woodrow Wilson Society, the John Simon Guggenheim Society, the New York Academy of Sciences, the American Association for the Advancement of Sciences, and the American Academy of Arts and Sciences. He is also the recipient of two of the most prestigious awards available to statisticians: the Samuel S. Wilks Medal of the American Statistical Association and the Parzen Prize for Statistical Innovation.

**Eileen Mary Sclan** is currently an Assistant Professor of Education in the Department of Curriculum and Instruction at Long Island University—C.W. Post Campus. Her main areas of research interest include teachers' workplace conditions, teacher performance evaluation, and teacher induction. At present, she is analyzing national data (funded by an AERA/NCES grant) to examine the inequitable distribution of qualified teachers and workplace supports. Dr. Sclan received her Ed.D. in Educational Leadership from Teachers College, Columbia University.

**David Stern** is Professor of Education at the University of California at Berkeley, and Director of the National Center for Research in Vocational Education, based at Berkeley's Graduate School of Education. From 1993 to 1995, he was principal administrator in the Center for Educational Research and Innovation at the Organization for Economic Cooperation and Development in Paris. Since 1976, he has been on the faculty at Berkeley, teaching and conducting research on the relationship between education and work, and on resource allocation in schools. David Stern is the lead author of several recent books: *School to Work: Research Programs in the United States* (with N. Finkelstein, J. Stone III, J. Latting, and C. Dornsife 1995); *School-Based Enterprise: Productive Learning in American High Schools* (with J. Stone III, C. Hopkins, M. McMillion, and R. Crain 1994); and *Career Academies: Partnerships for Reconstructing American High Schools* (with M. Raby and C. Dayton 1992). He also co-edited *Market Failure in Training* (with J.M.M. Rtizen 1991), and *Adolescence and Work: Influences of Social Structure, Labor Markets, and Culture* (with D. Eichorn 1989).

**P. Michael Timpane**, Vice President of the Carnegie Foundation, is involved in developing all aspects of the programs of the Foundation. In his own research, he is assessing the progress and problems of contemporary national education reform. Mr. Timpane is also Professor of Education and former President of Teachers College, Columbia University, the world's most comprehensive graduate school for the preparation of educational, psychological, and health professionals. Previously, he served as Dean of Teachers College and as Deputy Director and Director of the federal government's National Institute of Education. He has conducted research on educational policy as a senior staff member at the Brookings Institution and the RAND Corporation. Also, Mr. Timpane is a member of the Pew Forum on Education Reform, for which he is currently organizing and editing a volume of essays on higher education's involvement in precollegiate school reform. In addition, he serves on the boards of Children's Television Workshop, the Southern Education Foundation, the Synergos Institute, and Jobs for Education and the American Associate of Higher Education. Mr. Timpane received a bachelor's and a master's degree in history from Catholic University, and an M.P.A. degree from Harvard University in 1970. He has received honorary doctorates from Wagner College and Catholic University.

## From Data to Information: New Directions for the National Center for Education Statistics

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The conference was held in Washington, DC on November 27–29, 1995. For the complete text of the proceedings, please see NCES Publication 96-901, *From Data to Information: New Directions for the National Center for Education Statistics*, which can be ordered from NCES Project Officer Edith McArthur at (202) 219-1442.

### 1 From Data to Information: New Directions for the National Center for Education Statistics

Gary Hoachlander: *From Data to Information: New Directions for the National Center for Education Statistics*

Emerson Elliott: *Introductory Comments*

### 2 Tracking Education Reform: Implications for Collecting National Data Through 2010

John F. Jennings and Diane Stark: *Tracking Education Reform: What Type of National Data Should Be Collected Through 2010?*

Christopher T. Cross and Amy Rukea Stempel: *Where Are We Going? Policy Implications for Data Collection Through 2010*

Discussant Comments by Mary J. Frase

### 3 Curriculum, Pedagogy, and Professional Development

Dominic J. Brewer and Cathleen Stasz: *Enhancing Opportunity to Learn Measures in NCES Data*

David R. Mandel: *Teacher Education, Training, and Staff Development: Implications for National Surveys*

Discussant Comments by Michael Timpane, Eileen M. Sclan, Mary Rollefson, and Sharon Bobbitt

### 4 Trends in Statistical and Analytic Methodology: Implications for National Surveys

Robert F. Boruch and George Terhanian: *"So What?" The Implications of New Analytic Methods for Designing NCES Surveys*

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- 5 New Data Collection Methodologies, Part II: Experimental Design**  
Charles E. Metcalf: *Incorporating Experimental Designs Into New NCES Data Collection Methodologies*  
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- 6 Postsecondary Education**  
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